



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

**75 Hawthorne Street
San Francisco, CA 94105**

14 July 2009

PARTIAL DENIAL LETTER

VIA ELECTRONIC MAIL AND U.S. MAIL

Shannon Little, Esq.
Holland & Knight
50 California Street, Suite 2800
San Francisco, CA 94111

Re: Freedom of Information Act Request 09-RIN-00330-09

Dear Ms. Little:

This is in response to the above-referenced Freedom of Information Act (FOIA) request, which the U.S. Environmental Protection Agency (EPA) received from your colleague, Renee Wentzel, requesting information related to the Omega Chemical Superfund Site. Your FOIA request, as qualified in subsequent communications with Steve Berninger, Assistant Regional Counsel, requested information about conditions on or under property located at 8921 Dice Road, Santa Fe Springs, California, and information about historical owners and historical operation of that facility.

This letter supplements EPA's prior responses to the FOIA request on May 7, 2009 and June 16, 2009, whereby EPA enclosed documents responsive to the FOIA request. As was discussed with Steve Berninger, we have not provided with this response two prior drafts of the remedial investigation (RI) report addressing OU-2 (groundwater contamination) at the Omega Site, prepared by EPA's contractor, CH2M Hill, in February and August 2008. We previously provided you with an internet link to the final draft RI report, released by EPA in March 2009. The draft RI reports are extremely large files, but we can make them available to you at your request.

In addition, we have not included e-mails in our response, consistent with your communication with Steve Berninger, in which you agreed that e-mails were not being sought at this time.

After reviewing the remaining documents potentially responsive to your FOIA request, we have enclosed with this letter two final documents responsive to your request, one of which has been partially redacted. This completes EPA's response to this FOIA request.

Ms. Shannon Little
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We are unable to provide you with certain documents that have been determined to be exempt from mandatory disclosure by virtue of the following FOIA provisions: 5 U.S.C. Section 552(b)(5) (deliberative process privilege, attorney work-product, and attorney-client privileged information) and Section 552(b)(7)(A) (information whose release could interfere with enforcement proceedings). Enclosed with this letter is an itemized list by category of the withheld material, along with the basis for withholding it.

Under FOIA, you have the right to appeal this partial denial determination to EPA, Office of Environmental Information, Records, Privacy, and FOIA Branch (2822T), 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. The appeal must be made in writing, and it must be received at this address no later than 30 calendar days from the date of this letter. The Agency will not consider appeals received after the 30-day limit. The appeal may include as much or as little related information as you wish, as long as it clearly identifies the determination being appealed (including the assigned FOIA request number, 09-RIN-00330-09). For quickest possible handling, the appeal letter and its envelope should be marked "Freedom of Information Act Appeal".

Please contact Steve Berninger at (415) 972-3909 if you have any questions concerning this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Takata", followed by a horizontal line.

Keith Takata
Superfund Division Director

Enclosures

cc: Renee Wentzel, Holland & Knight, w/ enclosures

DOCUMENTS WITHHELD - FOIA REQUEST NO. 09-RIN-00330-09

We have determined that the following documents are exempt from mandatory disclosure under 5 U.S.C. Section 552(b)(5), which pertains to inter- and intra-agency communications protected by the deliberative process privilege, and Section 552(b)(7)(A), which pertains to records or information compiled for law enforcement purposes, the release of which reasonably could be expected to interfere with enforcement proceedings:

- Draft Memorandum from CH2M Hill to EPA, Findings of Review of DTSC Files for Selected Facilities within Omega Chemical OU-2, December 1, 2005. (Note that we have provided a redacted version of this document with this FOIA response.)

The following documents are exempt from mandatory disclosure by virtue of: 5 U.S.C. Section 552(b)(5), which pertains to inter- and intra-agency communications protected by the deliberative process privilege; Section 552(b)(5), which pertains to intra-agency communications protected by the deliberative process privilege, the attorney work-product privilege and the attorney-client privilege; and Section 552(b)(7)(A), which pertains to records or information compiled for law enforcement purposes, the release of which reasonably could be expected to interfere with enforcement proceedings:

- Memorandum regarding evidence of potential releases at 8921 Dice Road, potential liability of potentially responsible parties, and operational and ownership history at 8921 Dice Road, prepared for EPA by EPA contractor Science Applications International Corporation (SAIC), April 22, 2009.
- Six draft research and analysis memoranda from SAIC to EPA, pertaining to operational and ownership history at 8921 Dice Road, and enforcement options related to, and potential liability of, potentially responsible parties, dated: June 1, 2007; August 16, 2007; October 31, 2007; October 31, 2007 (redline); November 3, 2007 (redline); and November 5, 2007.

Revised Draft - Findings of Review of DTSC Files for Selected Facilities within Omega Chemical OU-2

TO: Christopher Lichens/USEPA Region IX
FROM: Tom Perina/CH2M HILL, Riverside
DATE: December 1, 2005

1. Introduction

As requested by the United States Environmental Protection Agency (USEPA), CH2M HILL has reviewed documents copied from regulatory agency files. [REDACTED]

[REDACTED]. The following three regulatory agencies were contacted for the file review process:

- Los Angeles County Department of Public Works (LACDPW)
- Regional Water Quality Control Board, Los Angeles Region (RWQCB)
- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

The file review request included a table of addresses for suspected areas of contamination in Whittier and Santa Fe Springs, California. The table was compiled from a database spreadsheet provided by SAIC, which was eventually screened for sites with key reports or information relating to soil and/or groundwater contamination within OU-2. The file review request table is included as Attachment A. Because the SAIC database was screened for sites that are most likely to have agency file records (and information on potential site contamination), this evaluation is not a complete search for potential sources; USEPA and SAIC will be performing the complete search. The copied documents also contained information on the lithology and hydrogeology at some of the sites; CH2M HILL will use this information for the OU-2 Remedial Investigation (RI). CH2M HILL provided duplicate copies of the documents to SAIC.

The findings of the review are presented as summaries for each facility. The summaries are organized into the following groups:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]

The findings for each group of facilities are presented in Sections 2, 3, and 4 of this memorandum.

The grouping is based on the information in the reviewed documents. Further records search and/or site investigations may result in changes to the categorization (mainly for Groups 2 and 3). [REDACTED]. The term "chemicals of concern" is used for any contaminants that may be commingled with the OU-2 plume in groundwater.

The summaries provide full or abbreviated citations of the sources of information. [REDACTED]

[REDACTED]. Only the documents that were used as sources for the information summaries (e.g., only the latest monitoring report, etc.) are listed in this memorandum. CH2M HILL has retained copies of portions of these and other documents. The availability of boring logs and other information is noted for later reference.

2. [REDACTED]

1. There is documented use and/or storage of the chemicals of concern at the facility.
2. There is documented presence of the chemicals of concern in the subsurface soils at the facility, indicating their release at the property.
3. There is documented presence of the chemicals of concern in groundwater beneath the facility.

2.1 Fine Line Paint Corporation

Street Address

1200 Los Nietos Road, Santa Fe Springs, CA

Background

Paint manufacturing since 1953. History of discharges of paint wastes to the ground. Handled solvents. Used five underground storage tanks (USTs).

Groundwater gradient was 0.009 foot per foot (ft/ft) to the southwest (220 degrees) on January 19, 1995.

Contamination in Soil

Metals detected. Volatile organic compounds (VOCs) included trichloroethane (TCA), acetone, chloroform, toluene, and low concentrations of trichloroethene (TCE) and tetrachloroethene (PCE).

Contamination in Groundwater

In 1995, the maximum concentrations were TCE at 156 micrograms per liter ($\mu\text{g/L}$); PCE at 142 $\mu\text{g/L}$; 1,1-dichloroethene (1,1-DCE) at 2,580 $\mu\text{g/L}$; TCA at 3,950 $\mu\text{g/L}$; 1,1-dichloroethane (1,1-DCA) at 46 $\mu\text{g/L}$; and 1,2-dichloroethene (1,2-DCE) at 16 $\mu\text{g/L}$. The absence of the daughter products and overall low concentrations in the vadose zone were used as a basis for determination that the groundwater plume did not originate onsite.

Conclusions

[REDACTED]

[REDACTED]

[REDACTED]

Sources

Preliminary Assessment Summary dated January 1986.

Site Tracking Sheet dated June 30, 1987.

Soil and Groundwater Investigation Report dated February 8, 1995.

2.2 Former Chrysler New-Car Preparation Facility

Street Address

1200 Los Nietos Road, Santa Fe Springs, CA

Background

Chlorinated compounds were originally detected in soil at the time a clarifier was removed from the Chrysler New-Car Preparation facility in 1988. Seven groundwater monitoring wells were subsequently constructed.

The groundwater gradient is to the south (this information is suspect).

Contamination in Soil

Chlorinated compounds.

Contamination in Groundwater

TCE, PCE, and other compounds were detected in all wells including upgradient wells. TCE concentrations in groundwater ranged from 63 to 500 µg/L; concentrations of PCE ranged from 2.1 to 520 µg/L.

Conclusions

[REDACTED]

[REDACTED]

[REDACTED]

Sources

Converse Environmental West, December 1990 (CH2M HILL does not have copies).

Figure 1 - Site Plan with Soil Boring and Well Locations. Report citation unknown.

2.3 Former Angeles Chemical Company Facility

Street Address

8915 Sorensen Avenue, Santa Fe Springs, CA

Background

The former Angeles Chemical Company Facility (Angeles) consists of approximately 1.8 acres of land, completely fenced. Angeles Chemical Company operated as a bulk chemical repackaging facility at the property from 1976 to 2000. The facility included 34 USTs. One UST was used for diesel fuel; one UST was used for unleaded gasoline; and the remaining USTs were used to store chemicals prior to repackaging. Between 1998 and 2001, 18 USTs were excavated and removed from the site, and the remaining 16 USTs were emptied and filled with cement slurries for decommission (Shaw, 2004).

Chemicals used and stored at the facility included (but were not limited to) acetone, methylene chloride, 1,1,1-trichloroethane (1,1,1-TCA), PCE, methyl ethyl ketone (MEK), toluene, xylene, kerosene, diesel, and unleaded gasoline (Blakely, 2002).

SCS Engineers conducted the first subsurface investigation at Angeles in 1990. Several soil borings and one groundwater monitoring well were constructed. In 1993, DTSC ordered Angeles Chemical Company to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the site. As part of the RI/FS, additional investigations were conducted at the site in 1993 and 1994 by SCS Engineers. Several soil borings and five monitoring wells were subsequently constructed.

Shaw Environmental and Infrastructure, Inc. (Shaw) conducted additional investigations at the site between June 2002 and late 2003 that included 29 soil borings, 26 cone penetrometer test (CPT) pushes, and 19 monitoring wells. The report (Shaw, 2004) states that contamination from the former McKesson property migrated beneath the Angeles site. The report also identified other adjacent property owners with known or suspected environmental issues, including:

- Air Liquide Facility - Located immediately west of the former Angeles site at 8832 Dice Road; included an unlined waste pond used for storage of water and residues from acetylene production.
- Pilot Chemical Company - Located at 11756 Burke Street; documented presence of VOCs in groundwater.
- Southern California Chemical Corporation - Located at 8851 Dice Road, west of the former Angeles site; history of hazardous waste discharges dating back to 1957.

The sites listed above as well as several other sites with environmental issues are presented in Appendix C, Figure 1-2 of Shaw (2004).

Wastewater with solvents may have leaked to the Angeles property from the McKesson facility. McKesson discharged the solvent wastewater into an unlined ditch at the northern end of their property. This wastewater may have saturated the 30-foot perched zone sloping north and flowed underneath the Angeles property (Blakely, 2001; Shaw, 2004).

Site Hydrogeology

Groundwater occurs in two hydrogeologic units beneath the Angeles site: a shallow zone, at about 30 to 35 feet below ground surface (bgs); and a deep zone at about 45 to 55 feet bgs that is interpreted to be the top of the regional aquifer system. The flow direction in deep groundwater is to the west-southwest, while the flow direction in the shallow zone is variable and is controlled by local recharge and site-specific hydrogeology. Gaspar, Gage, and Hollydale aquifers have been impacted by VOCs at the site (Blakely, 2004).

Contamination in Soil

The predominant VOCs detected in soil or soil gas samples were acetone, MEK, methyl isobutyl ketone (MIBK), TCE, PCE, 1,1,1-TCA, chloroethane, toluene, and xylenes.

Soil vapor surveys were conducted in 1997 and 2002. Results from the tests indicate that VOC concentrations were relatively low at 8 feet, but generally higher at 20 feet. In addition, the surveys found higher VOC concentrations in soil vapor along the southern boundary of the site (adjacent to the McKesson boundary), compared to data from the eastern and northern property boundaries.

Contamination in Groundwater

The predominant VOCs detected in groundwater include:

- Benzene - range from 63 to 795 µg/L
- TCE - range from 45 to 14,300 µg/L
- PCE - range from 134 mg/L to 5,370 µg/L
- 1,1,1-TCA - range from 90 to 36,200 µg/L
- Toluene - range from 398 to 12,700 µg/L
- Xylenes - range from 186 to 7,790 µg/L
- 1,1-DCA - range from 85 to 2,260 µg/L
- 1,2-DCA - range from 31 to 1,140 µg/L
- 1,1-DCE - range from 151 to 2,800 µg/L
- Ethylbenzene - range from 45 to 1,910 µg/L
- Methylene chloride - range from nondetect (ND) to 6,530 µg/L
- MEK - up to 23,700 µg/L
- Acetone - up to 32,400 µg/L

Shallow Groundwater

Key compounds detected in shallow groundwater at the site in second quarter 2003 include:

- 1,1,1-TCA - Maximum of 4,510 µg/L at MW-10; screen interval of 25 to 32.5 feet bgs
- TCE - Maximum of 2,530 µg/L at MW-16; screen interval of 29 to 46 feet bgs
- PCE - Maximum of 2,930 µg/L at MW-26; screen interval of 30 to 40 feet bgs
- 1,1-DCA - Maximum of 47,400 µg/L at MW-10; screen interval of 25 to 32.5 feet bgs
- cis-1,2-DCE - Maximum of 15,900 µg/L at MW-18; screen interval of 31 to 46 feet bgs
- Acetone - Maximum of 73,000 µg/L at MW-10; screen interval of 25 to 32.5 feet bgs
- Xylenes - Maximum of 6,870 µg/L at MW-26; screen interval of 30 to 40 feet bgs
- 1,4-dioxane - Maximum of 7,150 µg/L at MW-9; unknown screen interval

Free product was also reported floating at several monitoring wells near the southern boundary of the Angeles site. The product is a light nonaqueous phase liquid (LNAPL) consisting of petroleum hydrocarbons (812,000 milligrams per liter [mg/L] and 801,000 mg/L of total petroleum hydrocarbons [TPH] and gasoline, respectively) with smaller concentrations of VOCs including acetone, MEK, 1,1-DCA, 1,1-DCE, TCE, PCE, 1,1,1-TCA, ethylbenzene, toluene, and xylenes.

Deep Groundwater

Key compounds detected in deep groundwater in the third quarter include:

- 1,1,1-TCA - Maximum of 70 µg/L at MW-21; screen interval of 54 to 64 feet bgs
- TCE - Maximum of 95 µg/L at MW-21; screen interval of 54 to 64 feet bgs
- PCE - Maximum of 161 µg/L at MW-13; screen interval of 53 to 63 feet bgs
- 1,1-DCA - Maximum of 535 µg/L at MW-21; screen interval of 54 to 64 feet bgs
- cis-1,2-DCE - Maximum of 1,060 µg/L at MW-21; screen interval of 54 to 64 feet bgs
- Toluene - Maximum of 7 µg/L at MW-20; screen interval of 57 to 67 feet bgs
- Xylenes - Maximum of 8 µg/L at MW-20; screen interval of 57 to 67 feet bgs

Conclusions

[REDACTED]

Sources

Blakely Environmental Investigations, Inc. 2001. Report of Solvent Discharge from the McKesson Facility to the Former Angeles Chemical Company.

Blakely Environmental Investigations, Inc. 2002. Subsurface Investigation Phase 1 Report of Findings, Former Angeles Chemical Company.

Blakely Environmental Investigations, Inc. February 2004. 2003 4th Quarter Groundwater Monitoring Report for Former Angeles Chemical Facility Santa Fe Springs, California.

SCS Engineers. February 1999. Draft Removal Action Workplan Operable Unit No. 2, Angeles Chemical Company Site, Santa Fe Springs, California.

Shaw Environmental and Infrastructure, Inc. February 2004. Summary Site Characterization Report Former Angeles Chemical Facility Santa Fe Springs, California.

2.4 Former McKesson Facility

Street Address

9005 Sorensen Avenue, Santa Fe Springs, CA

Background

The former McKesson facility (McKesson) is located at 9005 Sorensen Avenue in the city of Santa Fe Springs, Los Angeles County, California. The site consists of approximately 4.3 acres in a heavily industrialized area. To the north, the former Angeles facility is adjacent

to the McKesson property (Figure 1). A site plan of McKesson is presented in Attachment B, Figure 2 of GeoSyntec (2004).

A bulk chemical repackaging facility was operated at McKesson from 1976 to 1986. Operations ceased in 1986 and the site has remained inactive since that time. Some structures still remain at the site; 21 USTs were removed in 1996 (Geomatrix, 2000).

Solvent mixing operations between 1977 and 1986 resulted in a waste stream of a minimum of 1,500 gallons of solvent wastewater per day discharged into an unlined ditch (Blakely, 2001).

Chemicals historically used, stored, or mixed at the site include volatile organic solvents, glycols, acids, and petroleum hydrocarbons.

A soil vapor extraction (SVE) system has been in operation since 1994 to treat soils in the area of the former USTs. A conventional groundwater extraction system has been in operation since 1996 as an interim remedial measure. The interim measure was designed to capture contaminated groundwater at the site and prevent further downgradient migration of contaminants from the McKesson facility (Geomatrix, 2000). Time series plots of the cumulative mass of VOCs removed by the SVE and groundwater extraction systems are presented in Figures 20 and 23, respectively, in GeoSyntec (2004).

Site Hydrogeology

The McKesson site is underlain by silt and clay, silty sand and sand to a depth of at least 140 feet bgs. The coarse-grained water-producing units are contained within three zones, which have been correlated with the Gage, Hollydale, and Jefferson aquifers. Geomatrix (1995) defines these respective units as the perched zone, A zone (divided into A₁ and A₂), and B zone. The fine-grained units that separate the coarse-grained units consist of silt and clay. A regional hydrogeological transect location map and cross-section are presented in Figures 3 and 4, respectively, in Geomatrix (1995).

The upper sand that occurs between 15 and 30 feet bgs contains perched water during wet years. Underlying the silt and clay aquitard below the perched zone is a saturated coarse-grained unit between 50 and 120 feet bgs. The coarse-grained unit consists of two sands, each approximately 30 feet thick, which are separated by 15 feet of mixed silty sand, silt, and clay. This unit is the A zone, and the upper and lower sands are considered the A₁ and A₂ zones, respectively. The sand unit below A₂ is considered the B zone.

Figure 3 in GeoSyntec (2004) contains a potentiometric surface map for the A₁ zone in April 2004. As shown in the map, the overall gradient is to the southwest, with an average horizontal hydraulic gradient of 0.007 ft/ft. Depth to groundwater in April 2004 ranged from 46 to 52 feet bgs in the A₁ zone and from 49 to 51 feet bgs in the A₂ zone.

Geomatrix cites a report prepared by Harding Lawson Associates (HLA) in 1991, in which the A₁ zone transmissivity ranged from 1,350 and 5,350 square feet per day (ft²/day). With a screened interval of 20 feet, the resulting hydraulic conductivity was between 65 and 80 feet per day (ft/day). An aquifer test was conducted at wells located 1,000 feet northwest of the McKesson site by the Southern California Chemical facility in 1986. A transmissivity of 5,350 ft²/day was reported during testing. Assuming a thickness of 35 feet, the corresponding estimate of hydraulic conductivity for the A₁ zone was 153 ft/day (twice that of the HLA

report). Geomatrix (1995) estimated that the A₁ zone transmissivity ranges between 2,000 and 5,000 ft²/day, and later refined the estimate based on an extraction well pumping test to 4,500 ft²/day (Geomatrix, 1996).

Contamination in Soil

Analytical data from HLA in 1990 indicate the presence of VOCs and petroleum hydrocarbons beneath the McKesson site. Specifically, both soil and groundwater contained 1,1-DCA, methylene chloride, PCE, toluene, 1,1,1-TCA, TCE, acetone, MEK, 2-butoxyethanol (butyl cellosolve), and xylenes. In addition, soil samples contained 2-ethoxyethanol acetate (cellosolve acetate). Groundwater also contained 1,2-DCA, 1,1-DCE, and isopropanol.

Contamination in Groundwater

Geomatrix (1995) presents hydrogeologic cross-sections with summaries of water quality data for the McKesson and Angeles facilities for February and June 1995 (Figures 6 and 7, respectively) and a site location map showing PCE, 1,1,1-TCA, and methylene chloride concentration time series for the period between January 1990 and January 2001 (figure number not available).

A summary of water quality results for the First Quarter 2004 is as follows:

- PCE: 3.2 to 37,000 µg/L
- TCE: 28 to 14,000 µg/L
- 1,1,1-TCA: 0.15 to 190,000 µg/L
- cis-1,2-DCE: 0.25 to 6,600 µg/L
- Vinyl chloride: 0.34 to 810 µg/L

The contribution of chlorinated compounds from the property to the groundwater has been recently characterized. TCE concentrations upgradient and downgradient of the property are 10 to 170 µg/L and 46 to 660 µg/L, respectively. PCE concentrations upgradient and downgradient of the property are 17 to 160 µg/L and 43 to 2,300 µg/L, respectively. Concentrations of 1,1,1-TCA, vinyl chloride, cis-1,2-DCE, 1,1-DCE, and 1,1-DCA are also higher downgradient than upgradient. Concentrations of freons in upgradient and downgradient samples are similar (GeoSyntec, 2005). While freons are considered signature compounds for the Omega facility, 1,1,1-TCA is considered a signature compound for the McKesson facility.

McKesson prepared (and presented to DTSC) a list of 200 potential sources located within a 2-mile distance of their facility accompanied by a map (Geomatrix, 1995).

Conclusions

[REDACTED]

Sources

Blakely Environmental Investigations, Inc. 2001. Report of Solvent Discharge from the McKesson Facility to the Former Angeles Chemical Company.

Geomatrix Consultants. July 1995. Interim Remedial Measure Analysis of Alternatives and Work Plan for Design - Former McKesson Facility, 9005 Sorensen Avenue, Santa Fe Springs, California.

Geomatrix Consultants. January 1996. Groundwater Interim Remedial Measure Design Report - Former McKesson Facility, 9005 Sorensen Avenue, Santa Fe Springs, California.

Geomatrix Consultants. November 2000. Revised Five-Year Review of Remediation Progress - Former McKesson Facility, 9005 Sorensen Avenue, Santa Fe Springs, California.

GeoSyntec Consultants, Inc. 2004. First Quarter 2004 Groundwater Monitoring Report - Former McKesson Facility, McKesson Corporation Property, 9005 Sorensen Avenue, Santa Fe Springs, California.

GeoSyntec Consultants, Inc. 2005. Off-Property Investigation Report - Former McKesson Facility, 9005 Sorensen Avenue, Santa Fe Springs, California.

Presentation, October 10, 2001. Summary of Investigation and Remediation Efforts at Former McKesson Facility Santa Fe Springs, California. Presented to California Department of Toxic Substances Control.

2.5 G&M Oil Company Station No. 16

Street Address

12559 Lambert Road, Whittier, CA

Background

The site has historically been used for retail gasoline sales since at least 1965. It currently has four USTs. A release was discovered in 1991. The site is in a quarterly monitoring program and has 16 wells. An SVE test was performed on two wells in 2000.

Three adjacent properties also have UST-related releases of petroleum hydrocarbons:

1. 8438 Santa Fe Springs Road
2. Tune Tech, 12612 Lambert Road
3. American Medical Enterprises, 12508 Lambert Road

Historical groundwater elevations (tables) are available. Groundwater flow at the site is generally to the southwest; water levels at some of the site wells indicate that different aquifer units may be screened.

Lead agency: RWQCB

Contamination in Soil

Benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) from USTs.

Contamination in Groundwater

MTBE concentrations range up to 39,000 µg/L and benzene concentrations up to 32,800 µg/L. The size of the benzene and TPH plume is about 80 by 100 feet. The lateral extent of MTBE and vertical extent of all contamination are unknown.

Conclusions

[REDACTED]

Groundwater elevations are measured quarterly, and because of the site location (at the intersection of Santa Fe Springs Road and Lambert Road), these data would be useful for characterizing groundwater flow in OU-2.

Source

Site Conceptual Model Quarterly Update dated October 15, 2004.

2.6 Modine Manufacturing Company

Street Address

12252 E. Whittier Boulevard, Whittier, CA 90606

Background

Modine Manufacturing Company (Modine) has manufactured and painted automotive radiators since 1950, and is still active. DTSC did not investigate the site history prior to 1950. Modine is a hazardous waste generator (waste oil, lead, paint chips).

An Environmental Closure Audit dated May 1987 stated that TCA was among chemicals used at the facility. The audit also stated that a 7,500-gallon UST, formerly used to store solvents for paint dilution, was removed in 1985 and no soil contamination was identified. However, the documents reviewed indicated that soil samples were not analyzed for VOCs, only for semivolatile organic compounds (SVOCs).

Paint waste was stored in an onsite "landfill" between 1950 and 1960. The waste was excavated in 1989. Closure was approved by the Los Angeles County Department of Health Services (LACDHS) in January 1991.

Contamination in Soil

Soil contaminated by metals and oil was excavated. Contamination by VOCs is unknown.

Contamination in Groundwater

TCE and PCE concentrations were up to 13 and 42 µg/L, respectively, in 1989. Well No. 1 contained trace amounts of trichlorofluoromethane (Freon 11) and toluene.

Conclusions

[REDACTED]

Source

BCL Associates, Inc., September 1988. Environmental Fate Assessment and Risk Analysis - Modine Manufacturing Company Whittier Facility.

BCL Associates, Inc., March 1989. Final Remedial Action Plan - Modine Manufacturing Company, Whittier Facility.

Department of Health Services, May 1984. Preliminary Assessment Summary.

The Earth Technology Corporation, December 1990. Closure Report for the Modine Manufacturing Company Facility Located at 12252 East Whittier Boulevard, Whittier, California.

2.7 Phibro-Tech, Inc.

Street Address

8851 Dice Road, Santa Fe Springs, CA

Background

The property was first a railroad switching station (with no permanent structures prior to 1945), then a foundry casting facility between the late 1940s and early 1950s, Best Fertilizer between 1949 and 1954, a chemical plant for Pacific Western Chemical Company from 1957 to 1960, and since 1960 was operated (under various names) by Southern California Chemical (SCC), a division of CP Chemicals, Inc. SCC received liquid hazardous wastes for reprocessing. The current name of the owner and operator is SCC/Phibro-Tech, Inc. (since 1994).

Environmental investigations started in 1985. Results of constant-rate pumping test are available (1991). Tables of historic groundwater monitoring data are available. The lead agency is DTSC.

Contamination in Soil

Polychlorinated biphenyls (PCBs), TCE, 1,2-DCA, methylene chloride, acetone, and metals found in soils originated from site activities.

Contamination in Groundwater

The highest concentrations, in July 2004 were 32 µg/L hexavalent chromium; 500 µg/L TCE; 190 µg/L 1,1-DCA; 100 µg/L 1,2-DCA; 91 µg/L 1,1-DCE; 83 µg/L cis-1,2-DCE; 75 µg/L PCE; and 39 µg/L chloroform. Also present were 1,1,1-TCA, carbon tetrachloride, chlorobenzene, Freon 11, and methylene chloride; no PCBs were detected.

The contaminated unit was identified as the Hollydale aquifer. The underlying Jefferson aquifer appears to be merged with Hollydale at the site.

Conclusions

[REDACTED]

[REDACTED]

[REDACTED]

Sources

CDM. December 6, 1991. RCRA Facility Investigation Report.
CDM. April 23, 1993. RCRA Facility Investigation Phase II Report.
CDM. August 10, 1994. Preliminary Endangerment Assessment.
CDM. June 29, 1999. Off-Site Soil Investigation Report.
CDM. October 11, 2004. July 2004 Quarterly Sampling Report (by Sharon Wallin, CDM).
DTSC. August 2, 1995. Hazardous Waste Facility Permit Modification.

2.8 Pilot Chemical Corporation

Street Address

11756 Burke Street, Santa Fe Springs, CA 90670

Background

Pilot Chemical started operation at the site in 1952 and manufactures detergents and emulsifiers. Chemicals used in the manufacturing process include long-chain sulfanated hydrocarbons such as linear alkyl benzene sulfonate and dixilyl-sulfone. The site has a history of violations dating to 1954, including spills of corrosive liquids, oil and acid spills, tank and pipe leaks, etc. Contaminated soil was to be excavated and bioremediated onsite in 1989. Leaking fuel USTs were removed in 1988. An SVE system was in place in 1991.

The nearest drinking water well is 1623M located one-quarter mile to the northwest (the document did not list Santa Fe Springs Well No. 1). Confined groundwater was at 55 feet; the groundwater gradient was to the southwest in 1991. Boring logs are available.

Contamination in Soil

Pilot Chemical intended to excavate and clean the contaminated soil. Fuel hydrocarbons (toluene, ethylbenzene, and xylenes) were found in 1991. Concentrations of chlorinated compounds are unknown (soil samples were not analyzed for them).

Contamination in Groundwater

The highest concentrations in 1991 were: 110,000 parts per billion (ppb) toluene; 14,000 ppb ethylbenzene; and 52,000 ppb xylenes. Concentrations of chlorinated compounds are unknown (groundwater samples were not tested for them).

Conclusions

Sources

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site Inspection (pre-1989).

Work Plan for Soil Bioremediation dated 1989.

Final Report, Additional Subsurface Soil and Groundwater Assessment dated July 1991.

Subsurface Soil Investigation at the Former Underground Storage Tank Location dated October 16, 1991.

2.9 Techni-Braze, Inc.

Street Address

11845 Burke Street, Santa Fe Springs, CA

Background

The area was agricultural prior to 1966 (presumably a walnut grove) when it was acquired by Techni-Braze, Inc. (TBI). TBI conducts alloy brazing and heat treatment of metal parts. Hazardous wastes generated include acids, waste oil, PCE, and acetone.

Contamination in Soil

Soil contaminated by PCE was found at all sampling locations; concentrations in soil and soil gas were the highest near two suspected source areas. The soil concentrations decreased with depth at two borings.

Contamination in Groundwater

Concentrations in 1991 were: TCE at 10 and 100 µg/L (in two wells only); 1,2-DCA at 2 µg/L (in one well only); and PCE at 62 to 5,800 µg/L (in four wells).

Conclusions

Source

Subsurface Investigation Report prepared for DTSC and RWQCB dated October, 1991.

Street Address

Background

Contamination in Soil

Contamination in Groundwater

Conclusions

[REDACTED]

Source

Closure Request dated September 14, 2001.

Removal of Three Underground Storage Tanks Report dated December 2, 1997.

3. [REDACTED]

[REDACTED]

[REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

3.2 [REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Sources

[REDACTED]

3.3 Former Unocal Corporation District Office

Street Address

9645 Santa Fe Springs Road, Santa Fe Springs, CA

Background

The site is located in an area of historical oil production, refining, and storage, and other chemical manufacturing. Nearby properties were historically used as dumps for asphalt,

solvents (chlorinated hydrocarbons), processed oil-residual waste (polynuclear aromatic hydrocarbons [PAHs]), and other compounds.

Depth to the water table was 36 to 38 feet. The groundwater gradient was 0.001 ft/ft toward the south to south-southeast on January 27, 1998. The shallow groundwater zone is the Gage aquifer.

An SVE system operated from 1992 to 1996 and successfully cleaned vadose zone soils. Groundwater elevations are available for the period between 1983 and 1998.

Contamination in Soil

Petroleum hydrocarbons.

Contamination in Groundwater

BTEX, low levels of MTBE. Benzene may be from an upgradient source (identified as Dayton Superior).

Conclusions

The facility is likely not a source of groundwater contamination by VOCs within OU-2. Further records search for this area is recommended because of past waste handling at nearby properties.

Source

Groundwater Monitoring Report First Quarter 1998 dated February 26, 1998.

3.4 Foss Plating Company, Inc.

Street Address

8140 Secura Way, Santa Fe Springs, CA

Background

Foss Plating Company has performed metal plating since 1968. The facility was built on a vacant lot. The facility uses acid treatment, and oil and paint stripper; it generates hazardous waste in the form of sludge and filters.

Contamination in Soil

Unknown.

Contamination in Groundwater

Unknown.

Conclusions

[REDACTED]

Source

DTSC Inspection Report dated June 25, 2003.

3.5 [REDACTED]

Street Address
[REDACTED]

Background
[REDACTED]

Contamination in Soil
[REDACTED]

Contamination in Groundwater
[REDACTED]

Conclusions
[REDACTED]
[REDACTED]

Source
[REDACTED]

3.6 [REDACTED]

Street Address
[REDACTED]

Background
[REDACTED]

Contamination in Soil
[REDACTED]

Contamination in Groundwater
[REDACTED]

Conclusions
[REDACTED]
[REDACTED]

Source
[REDACTED]

3.7 [REDACTED]

Street Address
[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

3.8 [REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Sources

[REDACTED]

3.9 [REDACTED]

Street Address
[REDACTED]

Background
[REDACTED]

Contamination in Soil
[REDACTED]

Contamination in Groundwater
[REDACTED]

Conclusions
[REDACTED]

Source
[REDACTED]

4. [REDACTED]
[REDACTED]
[REDACTED]

4.1 [REDACTED]

Street Address
[REDACTED]

Background
[REDACTED]

Contamination in Soil
[REDACTED]

Contamination in Groundwater
[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

4.2 [REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

4.3 [REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

4.4

[REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

Contamination in Groundwater

[REDACTED]

Conclusions

[REDACTED]

Source

[REDACTED]

4.5

[REDACTED]

Street Address

[REDACTED]

Background

[REDACTED]

Contamination in Soil

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.6 Lincoln Industrial Center

Street Address

12500 Slauson Avenue, Santa Fe Springs, CA 90670

(Also referred to as Lincoln Distribution Center.)

Background

The facility had six USTs that held motor oil, diesel, and waste oil, and were removed in June 1986. Chlorinated hydrocarbons are not known to have been used at the site. Groundwater is confined (SCS, 1995) by a shallow clay layer with a bottom at 32 feet; groundwater flows to the southwest with a gradient of 0.0014 ft/ft.

Contamination in Soil

Petroleum hydrocarbons. No TCE or PCE detected in shallow soil gas (SCS, 1995).

Contamination in Groundwater

Diesel fuel as LNAPL in a limited area. TCE and PCE were found at concentrations up to 31 µg/L and 233 µg/L, respectively, in upgradient and downgradient wells. These compounds were determined to have originated offsite.

Conclusions

[REDACTED]

Sources

Limited Site Characterization Site Mitigation Plan dated June 19, 1988.

SCS Engineers. Summary Report dated September 1995.

SCS Engineers. Summary Report dated November 1995.

4.7 Valvoline Oil Company

Street Address

9520 John Street, Santa Fe Springs, CA

Background

Former UST site.

Contamination in Soil

Petroleum hydrocarbons.

Contamination in Groundwater

Minor BTEX concentrations. TCE and PCE were historically detected at concentrations between ND and 98 µg/L and between ND and 130 µg/L, respectively (the peak was in December 1993, and analysis for these constituents has not been conducted since); both compounds were determined to have originated offsite.

Conclusions



Source

DTSC Closure Letter dated December 10, 1997.

Groundwater Monitoring Reports dated 1996 and 1997.

Attachment A
File Review Request Table

Field Sampling Plan Addendum 5, Site B

Omega Chemical OU-2

PREPARED FOR: Lynda Deschambault/EPA
PREPARED BY: Tom Perina/RIV, Jennifer Galles/RIV
DATE: May 20, 2009
PROJECT NUMBER: 386743

This Sampling and Analysis Plan (SAP) Addendum 5 has been prepared to support the U.S. Environmental Protection Agency (EPA) in conducting a feasibility study (FS) for the Omega Chemical Superfund Site Operable Unit 2 (OU2).

This Addendum is a supplement to the existing Field Sampling Plan (FSP), *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study, Addendum 1* (CH2M HILL, 2006a) and *Quality Assurance Project Plan (QAPP) for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study, Addendum 1* (CH2M HILL, 2006b). Addendum 1 was prepared to supplement 2004 SAP (CH2M HILL, 2004a and 2004b). Several Addenda were prepared as part of this additional investigation at OU-2; only relevant Addenda are discussed herein. Addendum 5 was developed in accordance with EPA Region IX, *Guidance for Preparation of a U.S. EPA Region IX, Field Sampling Plan for EPA-Lead Superfund Projects* (EPA, 1993). Since this Addendum is a supplement to the existing FSP, not all sections are included as required in the EPA Region 9 Guidance.

Field activities covered by Addendum 5 include direct-push (Hydropunch®) sampling and soil sampling. The objective of this investigation is to confirm whether Site B is a source of VOC contamination in groundwater. This Addendum presents the rationale for the sampling locations and number of samples. All sampling procedures and analytical methods are explained in detail in Addendum 1.

Direct-Push Hydropunch® and Soil Sampling

Hydropunch® samples were successfully collected throughout OU2 during investigations described in the Remedial Investigation (RI) Report, *Draft Remedial Investigation Report, Omega Chemical Corporation Superfund Site Operable Unit 2* (CH2M HILL, 2009).

Six locations are proposed for Hydropunch® sampling and 4 locations are proposed for soil sampling (Figure 1). One Hydropunch® sample will be collected at each of the six locations to help identify the source of groundwater contamination. The soil samples will be collected on the Site B property to investigate the potential presence of contamination in the vadose zone. Two soil samples will be collected from each soil boring (for a total of 8 samples) at approximately 10 feet and 30 feet below ground surface. All sampling locations may need to be changed based on site access.

Comment [PT1]: Please check with Linda K about adding Cr6+ to the analyte list. Site B had a chromium operation and there was Cr6+ in groundwater historically. Adding Cr6+ poses a difficulty because of sample volume (and holding time). We are already stretching Hydropunch capacity with the 1,4-dioxane samples (two 1-line bottles).

Laboratory Analysis

The groundwater and soil samples will be analyzed for VOCs, SVOCs, and 1,4-dioxane using methods listed in the attached EPA Region 9 sample coordination center (RSCC) Superfund analytical request form (the methods are further described in Addendum 1).

For soil, three EnCore samples plus one four-ounce jar will be collected for VOC analysis. One metal sleeve will be collected for SVOC and 1,4-dioxane analysis. The sleeve must contain no less than 150 grams of soil (one 1-inch diameter, six-inch length sleeve is a minimum). Each sample sleeve will be capped on both ends, taped over the caps, and placed in a ziplock bag before storing in a shipping cooler.

References

CH2M HILL. 2004a. *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study*. Prepared for the U.S. Environmental Protection Agency. July.

CH2M HILL. 2004b. *Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study*. Prepared for the U.S. Environmental Protection Agency. July.

CH2M HILL. 2006a. *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1*. Prepared for the U.S. Environmental Protection Agency. November.

CH2M HILL. 2006b. *Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1*. Prepared for the U.S. Environmental Protection Agency. November.

CH2M HILL. 2009. *Draft Remedial Investigation Report, Omega Chemical Superfund Site Operable Unit 2*. Prepared for the U.S. Environmental Protection Agency. March.

U.S. Environmental Protection Agency. 1993. *EPA Region IX Guidance for Preparation of a U.S. EPA Region IX Field Sampling Plan for EPA-Lead Superfund Projects*.